CLAIMS

What is claimed is:

1. A stator for an electric drive; comprising:

   a stator housing in the form of a stack of laminations, said housing having opposite winding end portions and a stator bore which is defined by an axis;

   a pair of tubular insulators, one tubular insulator abutting an axis-confronting inner surface of one winding end portion and the other tubular insulator abutting an axis-confronting inner surface of the other winding end portion; and

   a cooling jacket arranged in circumferential direction of the stator housing,

   wherein one tubular insulator in concert with an end face of the housing and the cooling jacket bounds a cavity for receiving one winding end portion, and wherein the other tubular insulator in concert with another end face of the housing and the cooling jacket bounds a cavity for receiving the other winding end portion, with each of the cavities being filled out with insulating casting material.

2. The stator of claim 1, wherein each tubular insulator has a housing-confronting end face which includes a centering ring for radially centering the tubular insulator in relation to the stator bore of the housing.

3. The stator of claim 2, wherein the centering ring is formed integrally with the tubular insulator.

4. The stator of claim 2, and further comprising a pair of circular cover slides, one cover slide engaging slots of the housing at one end face thereof to cover a slot structure, and the other cover slide engaging slots of the housing at another end face thereof to cover a slot structure, wherein the cover slides are arranged in surrounding relationship to the stator bore and project beyond the end faces of the housing, wherein the centering rings support the tubular insulators against the cover slides and seal a junction between the tubular insulators and the end faces of the housing in radial direction by abutting against a backside of the cover slides and in axial direction by bearing against slot flanks.

5. The stator of claim 1, wherein each tubular insulator has a housing-distal end provided with a reinforcement for providing a measure for a required filling height of the casting material during potting of the winding end portions.

6. An electric drive, comprising:

a stator including a stator housing in the form of a stack of laminations, said housing having opposite winding end portions and a stator bore which is defined by an axis and destined for receiving a rotor;

a pair of tubular insulators, one tubular insulator abutting an axis-confronting inner surface of one winding end portion and the other tubular insulator abutting an axis-confronting inner surface of the other winding end portion; and

a cooling jacket arranged in circumferential direction of the stator housing,

wherein one tubular insulator in concert with an end face of the housing and the cooling jacket bounds a cavity for receiving one winding end portion, and wherein the other tubular insulator in concert with another end face of the housing and the cooling jacket bounds a cavity for receiving the other winding end portion, with each of the cavities being filled out with insulating casting material.

7. The electric drive of claim 6, wherein each tubular insulator has a housing-confronting end face which includes a centering ring for radially centering the tubular insulator in relation to the stator bore of the housing.

8. The electric drive of claim 7, wherein the centering ring is formed integrally with the tubular insulator.

9. The electric drive of claim 7, and further comprising a pair of circular cover slides, one cover slide engaging slots of the housing at one end face thereof to cover a slot structure, and the other cover slide engaging slots of the housing at another end face thereof to cover a slot structure, wherein the cover slides are arranged in surrounding relationship to the stator bore and project beyond the end faces of the housing, wherein the centering rings support the tubular insulators against the cover slides and seal a junction between the tubular insulators and the end faces of the housing in radial direction by abutting against a backside of the cover slides and in axial direction by bearing against slot flanks.

10. The stator of claim 6, wherein each tubular insulator has a housing-distal end provided with a reinforcement for providing a measure for a required filling height of the casting material during potting of the winding end portions.

11. A method of using a tubular insulator as lost casting mold for potting winding end portions of a stator for an electric drive with insulating casting material, comprising the steps of:

centering the tubular insulator in relation to a stator bore defined by an axis, by abutting the tubular insulator against an axis-confronting inner surface of a winding end portion such that the tubular insulator bounds a cavity in concert with an end face of a stator housing and a cooling jacket arranged in circumferential direction of the housing, for receiving a winding end portion; and

filling the cavity with insulating casting material.

12. A method of potting a winding end portion of a stator for an electric drive, comprising the steps of:

centering a tubular insulator in relation to a stator bore defined by an axis, by abutting the tubular insulator against an axis-confronting inner surface of a winding end portion;

forming a cavity for receiving the winding end portion, with the cavity being bounded by the tubular insulator in concert with an end face of a stator housing and a cooling jacket arranged in circumferential direction of the stator housing; and

filling the cavity with insulating casting material.

13. A method of insulating a winding end portion of a stator for an electric drive, comprising the steps of:

placing a stator housing in an upright position to expose a housing end face;

centering a tubular insulator in the housing in spaced-apart relation to an outer jacket, arranged in circumferential direction of the housing, thereby forming a mold with a cavity for receiving a winding end portion;

filling the cavity of the mold with insulating casting material, thereby potting the winding end portion in the cavity, with the mold remaining attached to the potted winding end portion.

14. The method of claim 13, wherein the casting material is poured into the cavity to a level determined by a dimension of the tubular insulator.